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SMART DESIGN FOR LIVABLE COMMUNITIES

February 3rd, 2016

Windham County Sheriff's Office
c/o Sheriff Keith Clark
P.O. Box 266
Newfane, VT 05345

Re: Summary Report – Structural Assessment for Liberty Mill in Bellows Falls, VT
S&A Project #15-016

Dear Sheriff Clark,

This letter is an executive summary of our structural assessment of the existing building located at 204 Paper Mill Road in Bellows Falls, Vermont. The observations and recommendations made in the attached report are based upon two site visits conducted on November 12th & 13th, 2015 with Otto Schwarz, PE of Ryan Biggs | David Clark.

The existing building, better known as Liberty Mill, was reviewed for its structural integrity to determine the feasibility of a future use as a detention and resource center for the Windham County Sheriff's Department. Previously an operating paper mill, the building is a three-story cast-in-place reinforced concrete structure originally built in the 1920's. The structure is partially built into grade between an active railroad and the Connecticut River. The floors and roof structure are flat slabs with drop panels bearing onto round interior columns and rectangular exterior columns. The perimeter of each level is lined with concrete spandrel beams and in-fill masonry walls. A later addition on the north end of the building consists of similar construction. The building has not been occupied for several years and appears to have been extensively vandalized.

To summarize our findings, the existing structure is in fair condition but deteriorating due to exposure to water. It has sufficient gravity load capacity; however, an alternative lateral force resisting system is required for future use as a sheriff's department. The existing floor slabs have the capacity to carry an allowable superimposed live load of 100 psf. The framing elements of the lateral system are either at or

Photo 1 – Eastern Elevation of Liberty Mill

significantly over capacity. Options for an alternative lateral system include concrete shear walls or steel brace frames.

Currently there are several areas of concrete deterioration and spalling. These will require removal of compromised material, replacement of reinforcing and patching of the concrete. Furthermore, the building will continue to deteriorate if left unmaintained and exposed to the elements. Water migration throughout the building has caused structural deficiencies at the south end of the building and along the western elevation. Temporarily enclosing the building, removing all standing water, and reconnecting all of the roof drains are recommended to stabilize the building. Additional investigation is needed to inventory the full extent of structural repairs needed.

The scope of the structural assessment includes a general conditions summary, a gravity and lateral analysis, and recommendations for the adapted reuse of the building. For further information and discussion regarding the structural assessment, please see the attached appendices.

Please contact us if you have any questions or comments.

Sincerely,

Sabrina Duk, PE, LEED AP-BD+C
Project Structural Engineer
Stevens & Associates, PC

Robert Stevens, PE, CNU, LEED AP
Principal
Stevens & Associates, PC